SETTLING ON CANADA'S FREE LAND

BY

A HOMESTEADER

ISSUED BY THE AUTHORITY OF
THE MINISTER OF THE INTERIOR,
OTTAWA, CANADA.
1915

HOMESTEAD REGULATIONS.

ENTRY—Any person who is the sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

DUTIES—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 60 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

A habitable house is required in every case, except when residence is performed in the vicinity in accordance with the regulations.

The area of cultivation required by regulations is subject to reduction in case of rough, scrubby or stony land after report is made by Homestead Inspector on application for patent.

APPLICATION FOR PATENT

should be made at the end of the three years, before the Local Agent, Sub-Agent, or the Homestead Inspector. Before making application for patent the settler is expected to give six months' notice in writing to the Commissioner of Dominion Lands at Ottawa of his intention to do so.

Before leaving his homestead, the settler should leave a post office address at which he can obtain his letters while away. If he is not careful he may overstay the time allowed, and find on his return that his homestead entry has been cancelled and taken up by someone else.

Should a settler find that he has accidentally settled upon a quarter-section of land which will not repay the labour expended upon it, he may apply to the Commissioner of Dominion Lands, Ottawa, stating fully the case, and asking for permission to change his entry. If the Commissioner is satisfied that the settler is entitled to a change, he will grant it on payment of a second fee.

Newly arrived immigrants will receive, free of expense, from the Officers in charge at the Immigration Office in Winnipeg, any Dominion Lands Office, or from the Department of the Interior, Ottawa, Canada, information as to lands that are open for entry.

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A Homesteader's Experience of Land Settlement in Canada

MOST of the emigrants to Canada, even if they have had no previous experience of country life, are charmed with the idea of taking up a free homestead—160 acres of farming land apparently for nothing. Here they can live, work and become independent. But many again have very hazy ideas as to how they come across the said farm; possibly they do not trouble to think about how that is managed, supposing that a Government guide selects for each one an altogether desirable homestead, and sets him down on the land. It is not so easy—but still, given the necessary information, the problem soon solves itself into a matter of time and money. Time in which to look for and select the land; money to pay the travelling; the selection fee of £2 when the land is chosen; to erect a small house within a stated time, so as to take possession of the homestead; provisions for the first year, and to purchase the necessary farm equipment—see pages 7 and 11.

It may as well be stated at once that a man with no more money than sufficient to meet the forestated expenses can only succeed as a homesteader in one—or one of two—ways. He works during the summer at a remunerative trade, pays to have a few acres of land ploughed, and lives for six months—during the fall and winter—on his farm. Or he may choose land adjoining that of a friend—already settled—and work for him or a neighbour during the busy season. In this way he might perform his own homestead cultivation duties, being loaned the team and plough, etc., in return for other work. So he pushes along from year to year till the land is his own. Then, if favourably situated, he may borrow money on it and fairly start work.

To begin with, all the land in Western Canada surveyed for settlement is laid out in townships of six miles square, and running from south to north and east to west (page 4), without any regard whatever to natural boundaries, such as rivers, etc. These townships are successively numbered from south to north, beginning with number one on the United States frontier. Every column of townships shown in this way on a map is called a range, and the range numbers run from east to west, commencing in each case from a principal meridian. Of these there are five between Winnipeg and the Rocky Mountains. Once the idea of this arrangement is grasped, it is easy to calculate the direction and distance to a certain township from the point from which one starts across country. For instance, the town of Lloydminster, founded by the "Barr" emigrants of 1903, lies on the dividing meridan between

the Provinces of Alberta and Saskatchewan, that is, between two sets of ranges. (See Fig. 1.) The ranges west of the town count 1, 2, 3, etc., westwards. Those east count backward from 28, as they start from No. 1 on the meridian lying about 165 miles east of this point. On any of the maps published for the settler's use, Lloydminster can be seen to lie partly on Township 50, Range XXVIII, west of the 3rd meridian, and partly on Township 50, Range I, west of the 4th. Therefore, it can be seen that—for in-

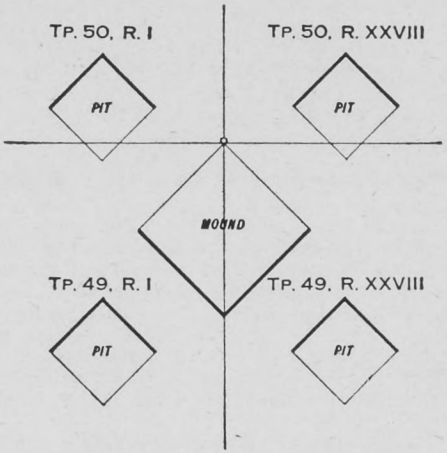


Fig. 1.—Showing Township Markings

instance—Township 53 in either of these two ranges lies about eighteen miles directly north. In like manner it can be seen that to reach Township 50, Range III, one must travel directly west for at least twelve miles, and so on.

The numbers of the townships are marked on posts erected at corners, and a small pit is dug by the surveyor in each of the four townships marked by the posts. (See Fig. 1.) This saves any confusion as to the points of the compass, as the lines shown crossing at right angles here do not actually exist.

If the desired township is a long way from the starting point it is best to follow an old trail—which would most likely be marked on the map—until one reaches the nearest point to the required township. Then the nearest corner pits are found, and the direction and distance calculated. In new unsettled country it is safer to work from post to post rather than try to go diagonally when off the known trail, and a pocket compass may well be carried. In country already partly settled, land-seeking is far easier.

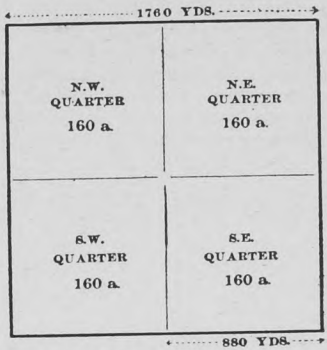


Fig. 2.—Plan of a Section—640 Acres or one Square Mile

The townships are all divided up into sections of a square mile each. There are thirty-six in each township, and usually sixteen of these are for free settlement. They are marked by corner posts, or by mounds in country where no stakes are to be had. There are four homesteads in each section. The quarter section contains 160 acres more or less, being a quarter of a square mile, and measuring half a mile each way, i.e., half a mile square. Information as to which quarter sections are open for settlement should be obtained from the Government land office of that district before going to see the land.

Once the land is chosen, it is not very difficult to determine the boundaries of the homestead. Each side of a section is 1,760 yards (one mile). With a measured rope any two men could measure the half of this distance from the corner post, and would know that the boundary line between the two homesteads must extend for half a mile at right angles to the measured line. (See Fig. 2.)

A man probably has some general idea of the district or part of the country where he would like to settle in the West, even if he has no one waiting for him over there. And he has arrived at this idea from the varying descriptions of the several provinces of Western Canada. He understands that Manitoba is generally reported to be a country of deep black soil full of humus or decayed vegetable matter. That, besides being a wheat country, it is suitable for any kind of farming that can stand a severely cold winter. He has a general idea that the southern part of Saskatchewan—formerly called Assiniboia—is mainly a treeless prairie country with a strong wheat soil. Further west it becomes a mixed farming and cattle-raising country, extending through Southern Alberta into the foothills of the Rockies. Central Alberta and the Saskatchewan Valley to the east of it is again a country of cultivable soil, perhaps not so full of humus as that of Manitoba, but

it enjoys as mild a climate and is just as well favoured so far as regards wood and water. But when he arrives at the lands office where he applies he can learn more than this. He learns for himself, from the map exhibited on the office walls and corrected day by day, where the vacant land lies. He asks for a description of the townships in the part he chooses, reads the reports of the land surveyors, and studies the township maps, which are drawn

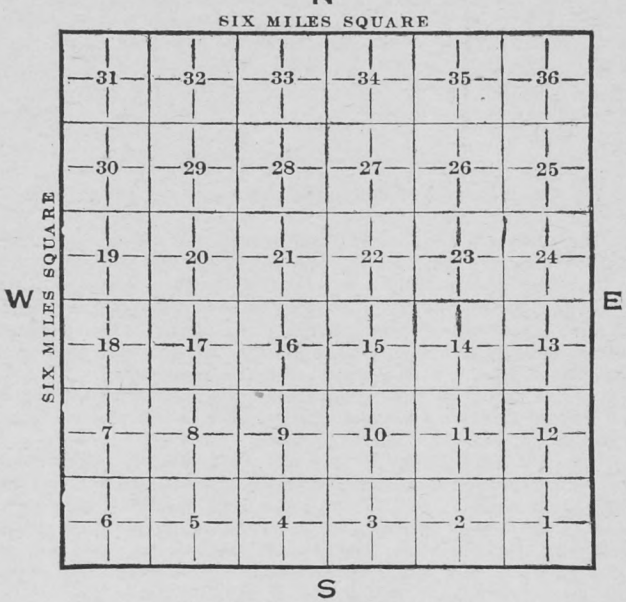


Fig. 3.—Plan of a Township

CHOOSING THE DISTRICT.

on a scale of about half a mile to the inch. These particulars should give him a very fair idea of the class of soil and the general surroundings, in fact, all that it is possible to know without going to see the land. If he doesn't think it worth while to make a journey of inspection in that direction, he goes back to the large map and begins his search anew. This is a far more reliable method of getting information than going straight out to a district he has heard of as good. It may be a good district, but he may rest assured that no stranger will put him up to a good homestead without being paid for his trouble, and it is better therefore not to trust himself except to the Government officials, agents or land guides, authorized to give information about the lands.

When he is satisfied in the lands office with what he can learn about any particular township, he asks for the number of the still vacant sections or homesteads, goes out and chooses the land, and returns at once to pay the registration fee of £2, when he is said to have filed on it. But a would-be settler should understand that he cannot expect to find a homestead within a reasonable distance of a widely and thickly settled centre, such as, for instance, Regina and Edmonton, unless he is satisfied with the poorer land that is left over. Otherwise it must be a long way from the railway. So it is better to travel straight away to a more newly settled district, which the railway is about to enter, in which case he would be already comparatively near a good place for settlement.

COMPARATIVE VALUE OF HOMESTEADS.

There may be various ways of deciding as to the comparative value of one homestead against another, but perhaps the sum of all desirable points is that the land shall be good enough to sell, or to raise a mortgage on, at the end of the three years. If there is anything about it that prevents it having such a value, it isn't worth taking up at any price, not even if close to a railway. There is land—poor, rough and stony—that will not grow crops, although its poorness does not arise from the presence of stones. The soil is too thin. There is broken hilly land. Even if it grows a thick natural herbage, which is not always the case, it does not make satisfactory land for ploughing, and a man with a very limited capital cannot depend on the returns from pasturing cattle. There is swampy land that cannot be drained. There is alkali land, where the soil is impregnated with soda-like salts from the soakage of stagnant water, and needs years of cultivation to recover its good qualities. There is scrub land, covered with useless trees, unsuitable for either the plough or live stock. There is no reason why the land-seeker should choose one of the foregoing, and the fault is his own if he does so, for there is land for everybody. Not always near the railway, not always within a day's journey, not always close to the line of a railway under construction.

But there is land! Good land and plenty of it! And it is the free land that draws so many to Canada.

KINDS OF FARMING.

The value of a homestead from a purely farming point of view depends upon the class of farming that the settler wishes to pursue. Perhaps the best way of illustrating this will be to imagine certain cases. There are many views from which we may consider land values for farming, but if we first take wheat-growing only into consideration, it simplifies matters somewhat, as the wheat-grower has three considerations standing out ahead of all others.

If a man is looking forward to wheat-growing, which gives him something like seven months' hard rushing work in the year—except for the slack time between the finish of the seeding and the preparation for harvest, a time which hardly exists in wheat-growing at home—his first care is to be within reasonable distance of a railway, to which he must "team" (i.e., cart) his wheat after threshing. Of course, the soil must be sufficiently "heavy" or rich enough—to use a term which is not so technical—to grow wheat, and he must have land reasonably level, for the less work there is in ploughing and cultivating, the quicker it is done. Rich level prairie, i.e., land with no bush or trees, and within half a day's teaming distance—say, fifteen miles—of a railway or grain elevator, is what a wheat-grower must look for. At any rate, it would be very inadvisable for him to take land not favourably situated in these respects.

Here is an abridged extract from a Dominion surveyor's report of land in a somewhat variable district just on the point of being opened up by new lines of rail: "A large proportion of the soil in this township may be termed first-class. It is chiefly a clay loam with a clay subsoil. The surface is almost entirely open prairie, and the greater part quite level." The nearest part of this township is within ten miles of two new railroads now under construction. By the end of three years from now the homesteader should be in good shape, on land worth at least £5 an acre to sell, and that means well worth keeping.

For good wheat land the small capitalist must go out on the line of a railroad or branch in process of construction, and he will be wise to buy more land adjoining his homestead as soon as he can do so. This is because wheat-growing alone needs a big acreage to bring in big profits with anything like regularity, although sometimes a succession of years of bumper crops and high prices easily help a man along toward getting rich. It is the favourite system of farming for the bachelor and for the man who has never done any farming before coming to this country. He should first get the necessary experience in wheat-growing, which, in this country, includes little more than the management of a team of horses, the handling of cultivating and harvesting machinery, and a knowledge of local weather and crop conditions that is gradually attained, and can best be had by following close upon the heels of a neighbour who seems to be better experienced.

The first year upon a wheat homestead brings no return, as the newly-broken land is in too crude a condition to do more than grow a rough crop of feed oats that may be scrambled in hurriedly and gives enough sheaves to help the horses along through the next winter, and saves a certain amount of expenditure. That is why many men who can get work in the same district pay to have the first ploughing done, and many of those who have money buy a farm already "improved."

The capital advisable to go straight on to the land may be, roughly, put as follows, and in this estimate we are considering the case of two friends who, working together, add to the value of their capital and secure the companionship and mutual help that are big items in this life. (The conditions of settlement call for a habitable dwelling on each homestead, except that residence in the vicinity is allowed in certain circumstances.)

FIRST YEAR'S OUTLAY.

Two houses	$ 200	to	$ 300
Team of four horses	600	"	1,000
*Necessary machinery, waggon, plough, harness, and small tools	130	"	150
House and six months' food, stable and horse feed	350	"	500
	$1,280	"	$1,950
	(£256)	"	(£390)

The figures given may be subject to many modifications. Nearness to distributing centres means lower prices in machinery, building lumber and food supplies, and if there is work for the teams in the winter, money may be earned. But the great thing is that with land broken and ready for cropping the next year, credit is given by business men till the crop comes in. That first year's work, unless it is a very unfavourable summer, should mean there are 200 acres broken altogether on the two homesteads, however roughly, and maturing into a friable mould for the sowing of the first crop.

Now comes a further outlay.

SECOND YEAR.

Housekeeping for summer	$ 80	to	$ 100
Horse feed	100	"	150
*Machinery, seeder, harrows, binder, etc	150	"	250
Seed for 200 acres, 150 bushels wheat	100	"	150
Cost of threshing, say, 4,000 bushels at 5 to 7 cents	200	"	280
	$ 630	"	$ 930
	(£126)	"	(£186)

Here, again, it is difficult to estimate with any degree of exactitude either on expenditure or returns. New land requires little seed, as a heavy seeding results in a huge growth of straw and is light in grain, especially in a wet year that is favourable to a crop on old cultivated land. If the yield is put at 20 bushels per acre

*See page 30 for further details as to prices of machinery and cost of production.

Typical of Saskatchewan's Heavy Wheat Yields

it is a fair average and a satisfactory yield, although a very favourable season may nearly double it. The price of threshing depends on the whole yield in that district and the nearness to a busy centre.

The second year, then, may mean a net profit to each of something over $1,000, and the homesteaders have secured a good footing. They have money to spend on stables and granaries, etc., and a sure start for the next and final year, in which they complete the duties that make them the owners of the land. Two friends worth $1,000 (£200) each, might start on such a venture with every prospect of success.

Cattle Raising.—Now we come to the consideration of the cattle country for the man whose pocket is limited. He wants land where he can tend a small bunch of cattle. If he is not sufficiently well "fixed" to hold on till beef cattle mature in sufficient numbers to make an income, he sells calves, or, rather, yearlings, to the bigger ranchers who cannot give the personal attention and care to the new arrivals that the small man can, and therefore lose a greater percentage of the newcomers. Our friend now wants land that gives a good natural growth of grass; that yields trees for shelter and sufficiently large to make building logs, and to be near marsh land from which he can cut hay.

"The surface is prairie (i.e., open grassy land), and bluffs (i.e., clumps of trees). There are a few bluffs of black poplar up to 18 inches in diameter bordering on the river, and suitable for building. Hay can be procured from the neighbourhood of different lakes, sloughs, and marshes on several sections. The pasture is also very rich here. Game is very plentiful." Thus continues the surveyor's report from which we are quoting.

The land may be twenty-five miles or more from a railroad already working. Land for cattle need not be close to a railroad. Cattle raising requires more capital than wheat growing, and should not be undertaken by men who have no knowledge of cattle. Sheep farmers from the old country should go into the sheep districts of Southern Saskatchewan, where sheep are already established, and there is less risk from wolves, and better means of selling wool and mutton on the spot. The man with not much capital behind him must not lose sight of the fact that whatever he produces must be marketable in that district.

Mixed Farming.—The best kind of farming that can be practised by the man who intends to really settle and make his home on the land is mixed farming. It has as its basis the regular cropping of a certain acreage in wheat and oats, and, above that, something to occupy spare time in the winter season, so that there is always a profit from the land. Just what the man who, at home, is keen on having an allotment or small holding dreams of doing there, can be done in Canada on the homestead. There are not such

ready markets, there are not the many conveniences that help him in those things at home, but there is a bigger stake to work for, and it can be done.

If a man knows little of farming to begin with, there is the wheat growing to start him, and the other things will come little by little. He will start work with a pair of oxen rather than horses, as they cost less to begin with, and also less to feed, and if they are slower they will do for a few years till he is able to buy quicker working stock. He wants cows to give milk and butter. Butter-making is not a difficult matter once one is shown how to do it, though it requires brains and painstaking care to always get good results. He wants hens to supply eggs and chickens. He wants pigs to eat up the scraps and grow into money, and these animals also make good use of frozen wheat, if there is such an unfortunate harvest. And all these things bring in money and keep things going. Butter and eggs and pork are always accepted by the storekeeper against the groceries account, and it is a part of economical farming that too many farmers take no trouble about, so that usually the storekeepers have not too much of these commodities on hand, and will buy.

Now, the comparative value of land for mixed farming depends on various matters, and the following points must be noted in judging between the townships according to the surveyor's reports, and when one goes to see and inspect several homesteads in a chosen district, each may be judged in the same way.

1. Distance from Railroad.—Although this is placed first, it is not the most important point, but is easily disposed of. A few miles more or less on the same road makes little difference at this work, as one can more easily choose one's own time for the "teaming."

2. Character of Soil and Nature of Surface.—Not too heavy or sticky, for it is toilsome to cultivate. Not too sandy, for it suffers in a dry year and never gives heavy crops. Not too stony, for it interferes with cultivation and is usually poor land. With regard to the surface, there must be enough sufficiently level to be cultivated. If the remainder is broken or hillocky it matters little, if satisfactory in other respects.

3. Growth of Herbage on Virgin Land.—This shows what the land can do in raising a crop. If there is plenty of fine grass growing thickly, it is all right. Some of the very good land has short and poor herbage. That is the heavy wheat land, that can only do its best when freely cultivated. In places where the grass grows very tall and is coarse, the land is swampy, and gives plenty of coarse hay, but such land being without natural drainage is not as a rule worth ploughing, as it is always too cold and damp.

4. Nearness of Large Supplies of Hay.—That means that if there is neighbouring unoccupied marsh land, anyone is at liberty to cut the natural hay growing on it, and where animals are kept it is very necessary to store hay for winter use.

5. Water.—Springs, creeks, ponds, lakes and rivers. These all have their value if close by. A homestead with a good spring of water is much sought after, and a neighbouring creek, if constant all the year round, saves digging a well or the alternative of "sloo" water in summer and snow in winter. Fish may also be caught in the lakes and rivers.

6. Trees.—If not too thick on the land they give shelter to live stock, and serve for fencing and fuel.

7. Nearness of Building Timber.—Log cutting in winter means work in spare time, and saves buying cut timber to build stables and outhouses.

How is this description for the ideal homestead?

"The soil is a clay loam about six inches deep with clay subsoil, suitable for grain growing or ranching. The surface is rolling prairie alternating with clumps of poplar timber and willow brush. This is scattered more or less evenly over the whole township. There is a spruce bluff and numerous small ponds on the east boundary. There are very few hay meadows, but good long grass grows everywhere. There are several small creeks of fresh water. Small game is plentiful."

Added to this, the township immediately to the south contains a marsh which yields large amounts of hay, and small fruit is also said to be plentiful. To the north there is a large lake full of fish, which may be caught all through the winter. This township is twenty-five miles from the railway, with a prospect of being still nearer, as the probability of a branch line through that district is already leading to a keen search for homesteads in that direction, and it only requires certain news of where the new railroad is to run to make a swarm of settlers homestead all the available land. Now for another estimate of the cost of settling.*

FIRST YEAR NECESSARIES.

Team of oxen and harness	$200
Plough and wagon	100
Mowing machine and rake	90
Small tools	10
House lumber and outfit	100
	$500
	(£100)

SECOND YEAR MACHINERY.

Harrows	$ 45
Seeder	85
	$130
	(£26)

*See page 30 for further details as to prices of machinery and cost of production.

Any money over and above the cost of the first year necessaries can be freely spent in live stock, as there is an immediate return, and they establish one's credit for the second year purchases. Here are some prices:—

Cows, milking, from $30 to $40 each, about	$150
Pigs	25
Poultry—hens are worth 50c to $1 each	25
Extra for dairy outfit	10
Seed potatoes, etc.	10
	$220
	(£44)

To change, roughly, dollars to pounds sterling, divide by five, so that five dollars are equal to one sovereign. It is nearer to count five dollars as equal to one guinea.

Sheep.—Unless one is in a sheep district or is a sheep breeder, it is best to keep clear of them the first few years till there are convenient yards and buildings. They need considerable attention, and at a time when there are many other things to attend to, but they are profitable. There is not a doubt of that.

The first year's work, after arrival on the homestead early in May with a tenting outfit, may be summarized as follows:—

1. Breaking or ploughing during all spare time, so long as the land does not get too hard, as some kind of land may do in a hot, dry summer. Breaking **new** land can only be done effectively as a rule from June to August.
2. Sowing and fencing a garden.
3. Seeding oats for cattle feed.
4. Haymaking, which means cutting, leaving to dry, and stacking.
5. House and stable building; cellar digging.
6. Storing the garden produce.
7. Cutting the feed oats and stacking.
8. Making all snug for the winter.

The winter work consists in milking and tending stock, teaming grain to market, butter-making, poultry fattening and killing, carpentering, cutting logs and poles for outhouse buildings and fencing, fishing, and so far as possible getting ready for next year.

The English Farm Labourer in Western Canada.—Undoubtedly the man most wanted in Canada, and at the same time the one who can with a sure promise of success do best for himself there, is the "old country" farm labourer. Unfortunately—for those who need him—he is also wanted badly at home, but there he always remains poor, with a small wage and little else. The land he desires so much is beyond his reach at home. If he can get a good-sized garden allotment with his cottage he feels it to be a great thing, and yet in Canada a few years of work gives him the wherewithal to receive a gift of 160 acres on the condition that he turns it into a farm.

In England the farm labourer is usually a skilled man. He may have his work confined to one department—he is among the horses, or he is with the cows or sheep—but all his life he has from time to time occupied himself with the various kinds of work that fill up the year on an old country mixed farm. He can work with and tend horses. He can work with and tend cows, shear sheep, look after pigs, and generally is at home among all kinds of live stock. He can handle all kinds of farm machinery. He can plough and harrow, hoe and sow; can make hay, trim hedges, and thatch ricks. He can do, in fact, a thousand and one things that a Canadian or American raised on a wheat farm would be strange at, or know very imperfectly.

But in Western Canada the farm labourer from England is an "experienced green hand." That is how he is booked by the employment agencies. Never mind! He won't be that long, and when he is his own master he will make and nurse a farm which, by the very sight of it, is a testimony of how prosperous a man can become when he is at the work he loves and doing it for himself. But first he has something to learn. He learns to "hustle." That means to hurry, scramble through the work, if necessary, but anyway, get it done quickly. Of course, all this "hustling" arises in the first place through the need to make the most of all that the summer season gives.

We say in England: "Make hay while the sun shines." The translation of that into the Canadian understanding is: "Cut the grass! cut! cut!! cut!!! and let the hay make itself. If the sun does not keep on shining, that's not your fault." And as this is literally true in hay-making in Canada, and rightly so under the usual circumstances, so it is carried out on the same plan in all work on the prairie farm, at least, during the busy season. Very well, he learns to hustle, and he finds it hard to learn. He doesn't object to working hard but years of training make him feel that he likes to do things more thoroughly, and he thinks he knows how it ought to be done—but in England. Canada is not England, and he must learn to hustle for another man. Then when he comes to work for himself he combines that hustling with his earlier training. And he does well at farming, better, as a rule, than the man who first made him "hustle."

So that there waits for the British farm labourer—or better still, the farmer's son, who should be the labourer's equal in matters of work, but with the advantages of a better education and more money—three things. Disillusionment that perhaps at first makes him sick of things; some disagreeables that maybe continue all the time he is learning the new ways; and then the better part, success—SUCCESS spelt in big capital letters. A farm, for which he does not pay rent, and can sell if it pleases him to do so; a home where he can make things as cosy as he likes; fields of waving grain, crowds of live stock—all this the farm labourer might dream of having as his own.

It is true he must make it nearly all himself, but he has the bare land given him to start with, he goes where he chooses, he spends his small capital, he devotes a few years to hard work and patience, and he is then in as good circumstances as might satisfy any man who is content to be a farmer. Yes, if any man can do well in Canada it is the farm labourer. There is a fortune waiting for him.

The English in Western Canadian Town Life.—The old countryman in towns of Western Canada has to compete with the Eastern Canadian and the American, and when a man is sought to fill a salaried position, it is usually the old countryman who will be considered last.

That perhaps is only reasonable from the employer's point of view. He can't afford to pay a man good wages while he is getting accustomed to new methods of work and ways of doing business. So that, unless he arrives at a fortunate time, the Englishman and Scotchman seldom gets a good position till he becomes known personally in the town he chooses to settle in.

If he is a professional man he must have money behind him or **know somebody.** The lawyer and architect, the engineer and surveyor, the accountant and journalist, all have a great deal to learn, or unlearn. The doctor is handicapped in that it takes him a little time to become "unprofessional" and advertise himself against the competition of the Canadian born. As regards openings for school teachers, these exist chiefly in the Western Provinces, and teachers would be well advised to secure from the Canadian Government Emigration Department, 11-12 Charing Cross, London, S.W., or from the Provincial offices, full information.

Clerks and shop assistants, and they are not encouraged to emigrate, cannot, in large numbers, hope for much in Western Canada as such. The summer positions leave them stranded in winter, when such work is much desired and scarce. Of course, there are men of these callings who do well, but they are exceptions.

The mechanic, be he carpenter or bricklayer, smith or painter, has much to unlearn. He has probably had a more thorough training than the man he competes with, and he may be chosen for the finer work, but that won't help him to steady work in winter. "Shops" that work all the year round are few and far between. Most of the work is outdoors. Stonecutters, plasterers, joiners and plumbers are sometimes wanted badly during the summer months, and earn big money. There is always a slack time in winter.

The jack-of-all-trades with plenty of cheek, and tactful in the use of it, has the best chance.

The labourer can usually secure work all the summer and may go to bush work in the winter, or perhaps may be engaged in railway construction, where rock work and heavy cutting is done all winter.

HINTS AND ADVICE TO THE INTENDING SETTLER.

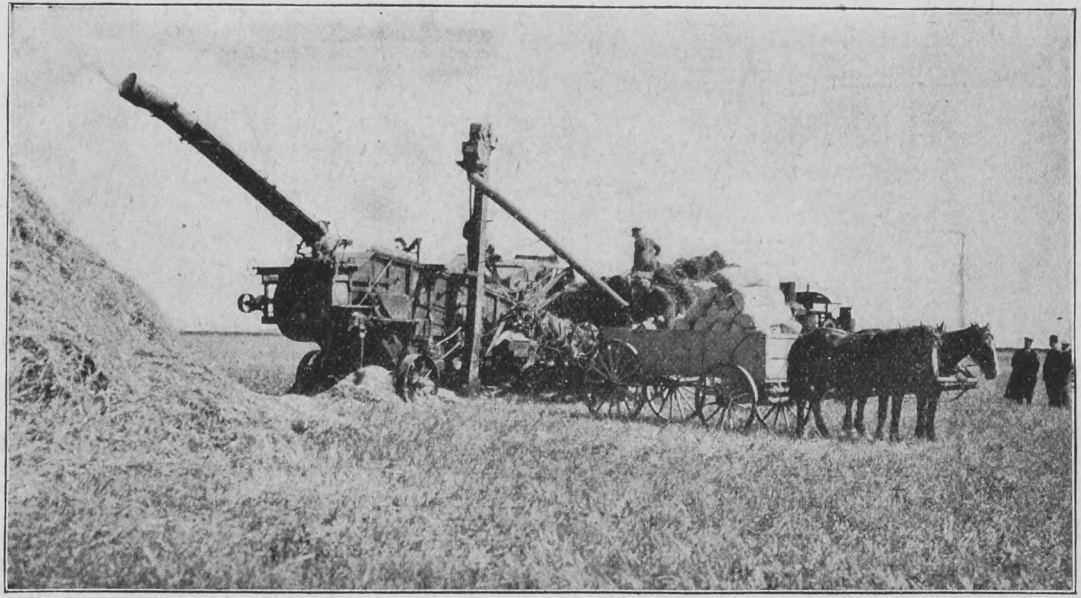
When a man begins to talk about having resolved to take a homestead he may meet with several offers to "put him up to" a "real good" one. That means that in return for a consideration, which may be anything from £2 to £20, he is given the official number of a certain quarter-section of land upon which he may "file" if he chooses. As the selection of a grant of wild land always means a certain expenditure of time and money if it is to be legitimately done, there are many "green" enough to take the short cut, and so the business of selling these tips continues to be a profitable one. These land-sharks are in no way connected with the Government nor are they authorized to give information, but being acquainted with the district they use their personal knowledge to entrap the would-be settler.

With people from the old country the great stumbling block in the way of the full exercise of the free choice allowed is the desire to be in a settled district. Many of them were familiar with town life at home. They want clubs, friendly societies, libraries, walks and outings, a daily paper, and frequent meetings with a few chums with whom they can discuss life's little troubles.

But even in the towns in Western Canada they will find these things to be far less satisfying than what they have been used to. It is better and certainly more profitable to break straight away from the old desires, and plunge clean into the new life without making any real sacrifices in the vain effort to realize the old remembrances.

To the Canadian or Western American who is a **bona fide** farmer, the nearness to an old settlement is quite a secondary consideration. He gives it its proper value, but it never stands first. He has probably been used all his life to living in the country, or if near a town, nothing more than the marketing of produce and procuring supplies has taken him there. In the new country he goes where he can get good land, even if he goes as the pioneer settler in a new district. It only needs reasonable prospect of a railway to be constructed in a few years to make him feel that there is a good time ahead. And he doesn't pay another man to tell him of a good homestead. He makes his enquiries at the nearest Government centre, and spends his money in travelling into the indicated district and finding his own land. He may have to pay a guide, but that is quite likely to be a profitable investment, at least it is not paying away money in the dark. He knows, even if at home he has been a poor-land farmer, that nothing can outweigh the grand asset of being the owner of good land, and you do not find him content to take land that will never repay the labour expended on it.

The stores in the railway towns from which supplies are secured



Modern Methods in Manitoba: Threshing from the Stook

do a thriving ready-money business throughout the summer—chiefly in food and household goods and hardware, such as small tools. Even the bachelors must spend a considerable amount in their outfit, and sometimes, if going on to the treeless prairie, no inconsiderable portion of the funds goes in the purchase of building material, and, perhaps, the teaming of it many miles to the homesteads.

To the man who decides to work on his land, in contradistinction to the "sitting down upon it"—which is all that many are able to do to begin with—a team either of horses or oxen is, of course, a necessity. Unless he is going to settle close to an old friend already established, it is useless to depend upon neighbours, each of whom has his own interests to consider. And the settler had better buy his team where he is living at the time of his departure for the homestead, for prices to homesteaders are always on the rise at the small towns or outlying farms, except in the fall of the year after threshing, and then it is very late in the season to make a beginning.

Generally speaking, and especially when going into a newly-opened district, a team of oxen will serve better than horses. They cost considerably less in the first instance, but they are slow, and, to a man used to horses, seem to be abominably stupid and obstinate. There is little of the interchange of sympathy and instinctive understanding that seems to quickly establish itself between horses and a man who is used to them. The oxen will pull heavy loads. They go steadily, and will stop dead when there is a hold-up, so avoiding breakages that often result from the more impulsive efforts of the horse. They can better stand the heavy strain of breaking the tough prairie sod, when for the first time since creation the plough goes through it. And, best of all, they are cheap to feed, as they can live and work all the year round on grass and hay, whereas the smaller digestive system of the horse demands a more concentrated food, such as oats, which must be bought, sometimes at high prices.

The prairie roads or trails are often very difficult to travel, especially in spring and after a spell of rainy weather, although the steady improvement that goes on year by year in grading and bridging is very extensive.

It may be as well to remark here that in the purchase of a wagon one with wide tyres makes easier and more secure travelling. In some parts of Canada the authorities are said to legislate as to the width of tyres, and even to give bonuses to encourage farmers in using the wide-tyred wagons. It is only under very exceptional conditions in the western country that the narrow tyre would afford an easier draft.

The apparent level of the prairie will be covered in early summer with the short sickly green blades of grass peeping up from among the dried-up growth of the previous year, or shooting from the blackened charred root stocks left after the passage of a prairie fire, and interspersed by the purple and yellow, lilac and white, of the flowers of the prairie crocus.

And the prairie level resolves itself into undulating rises and dips; here and there a hollow pocket filled with deep water, the real "sloo," or else a spring slough, with a coarse grassy growth showing above the water level, that later in the summer, when the water has dried up, will be mown for hay. Again, a long hog-back ridge, stretching for quite a distance along the sky line, and dotted here and there by what, on closer inspection, prove to be blocks of granite or other stone, and then, perhaps, a level of softer soil with a more generous herbage, and probably bluffs of willow in the dips and hollows, and poplar on the rises dotted over the landscape of what is now a park-like country. These are the districts that attract settlement the more readily, and make up for the black muskeg swamps and salt-strewn alkali flats that, in parts, are also characteristic of the western country.

A prairie trail winds considerably in the avoidance of hills and wet places, but there are spots that in some seasons of the year—notably spring—are practically impassable, and it is very difficult for people new to the country to make long detours and regain the original trail with any degree of security.

And this brings us to the consideration of the best time of the year for the journey. Undoubtedly, if the journey itself is the first thing to be considered, late in the summer—after the June rains have fallen and been forgotten—is the best time. The roads should then be in good condition. Muskegs—which are areas of waterlogged land—deep creeks and gullies, and occasional quicksand streams, must be crossed or negotiated somehow, and spring and early summer is a bad time on such a trail. I have known a wagon to be stuck so badly that three times in one day it had to be unloaded in order to get it over the bad places, and in that way much time is lost, even if breakages do not take place.

Yet, if the journey is left till late in the autumn, there are many disadvantages after arrival. So much has to be done in haying and building, and generally getting snug for the winter, that there is no time for ploughing, and not much opportunity for work of any kind in developing the homestead until after the winter is gone.

It is, however, the favourite time of the year for the bachelor. Till threshing is over he can be earning money, and in winter, having once put up a "shack," he can just sit down and earn his homestead.

Once arrived on the land, the first thing to consider is where to build. It is not always an easy thing to decide, but each man building for himself has the whole 160 acres—half a mile square—on which to choose a site. The desire to be near the trail affects different people adversely. Some wish to have frequent visitors. It breaks the monotony, and sometimes is the means of making a little money. Others, especially if only intending to live on the land one-half of the year, prefer to build in a more secluded spot. Many leave it altogether out of consideration.

On the level prairie there is little to choose from in the way of a suitable location. A place on one of the slight undulating rises satisfies all the conditions that can be had in such a situation. These are: A free circulation of fresh air and a dry foundation.

In the treeless districts, shelter from wind is out of the question until after years of occupation and the planting of a windbreak. The remaining thing to be desired is nearness to water. As a rule, in such districts small streams, lakes, and ponds—i.e., "sloos"—are not frequently met with. It is always a well that is required and this speculative work has to be left till the house is up. Meanwhile the daily water supply must be carried or the tent pitched elsewhere.

Well-sinking is always a necessary piece of work, as, of course, a permanent water supply is wanted.

It is rather difficult to point out how a little superficial knowledge of the stratification of rocks and the general tendency to slope in the sub-soil layers may guide one in selecting a likely spot for a well.

If by chance near a "sloo," first dig a filter hole—a shallow well on the bank. It avoids the direct use of the "sloo" water, which fouls as the summer advances, and is the quickest way to be sure of fairly good water, reserving as before said the final choice of a well site as secondary to the location of the house.

It would be tedious to imagine one by one the various locations that might present themselves in a country of such varied nature. Perhaps a rough review of sites that are decidely unsuitable will best satisfy the requirements of the uninitiated, before picturing the spot that should be very near to one's ideal so far as such a thing is ever realized.

Unsuitable locations that should not be chosen are:—

(1) Near the banks of a swampy "sloo" or muskeg. Usually the water is bad, and also difficult to get at either by man or animal. And it is a breeding place for mosquitoes.

(2) Near an alkaline "sloo," which in dry weather may be recognized before tasting the water by the presence of a crust of

white salts on the banks. A free dose of "salts" in every drink of water or tea is neither pleasant nor healthy.

(3) On an exposed ridge or knoll open to every wind that blows, and this is usually very stony under the surface. It interferes with cellar digging.

(4) A damp hollow, or in the bottom of a narrow valley where the morning fogs remain till late in the day and early frosts visit the garden far oftener than clean rising ground. In such a place, too, the cellar under the house fills with water, and the building is damp and unhealthy.

(5) Right in among the trees, for here the mosquitoes are a plague in the early summer, as they love to keep in sheltered spots where never a breeze can molest them.

Now for something of the best. Nothing can beat the open grassy glade, whether sheltered by bush or by rising ground. If a lake, stream, or other surface water is not near at hand, it is at least a likely spot for a well. The digging is not likely to be hard where a free surface growth is seen, and a level spot below a hill-side is a fine prospect.

But, most important of all, the location of the farmhouse should be near where most of the farm work will be done. On a wheat farm, near the cultivated land; on a stock farm, near where there are also conveniences for shelter, stabling, watering and feeding the animals. And all this is worth thinking out beforehand.

The Shack.—The settler's first dwelling house is termed a "shack." This means anything of simple construction, be it a sod or turf shanty, a small framed shed of sawn boards, or a log hut. One does not arrive at the dignity of living in a "house" except in town, or after the farm is in good working order, and can pay for it. The lumber—i.e., timber—shack, built of boards nailed to a plank frame, is the more common. It is usually the most convenient and easiest to erect, though by no means cheap, and not often—at least in the cheaper forms—weather-tight at the worst times of the year. For this a dry foundation must be had, because it must be built over a cellar, or the cellar dug afterwards underneath it, as, apart from the inconvenience of having the food stores and everything else filling up the living apartment, a cellar maintains a more equable temperature in summer and winter than a comparatively expensive addition to the frame shack for storage purposes.

The usual, and perhaps the wisest plan, is the construction of a one-room shack with a lean-to roof. To this—not in itself beautiful—may be added later on a ridge-roof front addition, having the orignal shack then as a kitchen. Certainly, except for a man with a family, this is the wisest mode of procedure. In soil that is firm, like that with a stiff clay sub-soil, the sills or foundation

planks of the shack frame may be laid along the edges of the cellar excavation without walling the cellar until later, but with subsoil of a looser nature, the cellar walling (presumably of planks, unless the homesteader prefers to use stone) may well be fixed when the sills are placed in position.

The cellar is made by digging within the marked-out building lot a pit measuring, say, 12 feet full across the width of the building by 8 feet (being 4 feet from either end of the lot), and about 5 feet deep. This excavated earth may be used later for banking up against the shack walls, and so keep the cellar warm for winter. It also prevents the entrance of wind beneath the floor at such times of the year when there is no snow on the ground. The cellar may be walled with 6 feet lengths of 1 inch thick planks standing on end, and held in position at bottom by a square frame placed inside, and above by nailing to the sills on two sides and to joists on the other sides. The joists that support the flooring are nailed on edge across the sills, and again across them goes the rough boarding for the first layer of flooring, of course providing for the trap-door entrance to the cellar.

Now the framing for the walls is put together. Front and back wall frames are separately nailed together, raised and temporarily fixed in position, and the rafters nailed across. The framing of the end walls is now fitted in, simply putting up studding (uprights) from floor to the end rafters. The window and door openings will now be arranged for, and the "shiplap" boarding nailed around outside the frames to form the first ply of walling.

Then comes the roofing. Rough boarding is nailed across the rafters and covered with black building paper, which is a cheap substitute for the felt roofing used in the Old Country, and then, having cut the chimney opening and fixed the sheet-iron smoke-pipe, the shingles are laid. These are slats of cedar wood—wooden slates or tiles, in fact—nailed in layers from the lower eave up to the slope of the roof. With the proviso that the joints must be well broken—i.e., not continuous up the roof slope—this is plain, straightforward work. Allow no more than 5 inches to the weather i.e., a row of shingles when laid should allow no more than 5 inches of the lower part of the underneath layer to be exposed as roof surface. The first or lowest line of shingles must be laid double.

Now the walls await completion. Building paper to cover the first ply of shiplap, and that in turn to be covered with another layer of shiplap, or, if preferred, "siding," which has a much better appearance, and sheds the rain thoroughly. Next fit in the window.

The door may now be made of tongued and grooved flooring and fixed in place, unless it is decided not to make a double-ply floor, in which case a cheap door may be bought ready-made;

but (at least as winter approaches) it is better to cover the first flooring with building paper, and again lay tongued and grooved flooring on that. Partitions (if wanted), shelves, cupboards, sleeping bunks, etc., may be fixed up at leisure from the boards that remain over. Painting need not be considered.

Any man at all familiar with the use of tools can do this work, and to a carpenter, of course, it is the simplest possible. If a rough carpenter, or anyone familiar with this work, is employed, he is worth at least $2 (8s. 3d.) a day and his keep, and, with the homesteader to help, could make easy work of it in four days.

A rough specification, giving quantities required for a 12 ft. x 16 ft. shack, here follows. A range of prices of material is also attached, though it is not very reliable, as prices vary so, according to nearness to commercial centres or to lumber mills.

Generally speaking, lumber is cheaper at points near the northern centres, such as Prince Albert and Edmonton, and dearer at or between the southern centres of Regina and Calgary.

The standard unit of lumber measurement is the square foot one inch thick. Prices are quoted at so much per thousand, reduced to this measurement.

Materials for Shack 12 ft. Wide, 16 ft. Long.

Cellar—	Standard No. of ft.	Price per 1,000	Cost in Dollars
Bottom frame (40 lin. ft. of 6in. by 4in.)	80	$30-35	$2.40-2.80
Walls (240 sq. ft. of 6in. by 1in.)	240	25-30	6.00-7.20
Shack—			
Sills (two lengths=32 lin. ft. of 6in. by 4 in.)	64	30-35	1.95-2.25
Joists (nine lengths of 12 ft. each=108 ft. of 2 in. by 7 in.)	126	25-30	3.10-3.80
Floor (shiplap=192 sq. ft.)	200	25-30	5.00-6.00
Floor (T. and G. flooring=192 sq. ft.)	200	32-40	6.40-8.00
Walls (studding and plates in frame as follows, 2 in. by 4 in.) Front frame (10 ft. high, nine lengths, and plates 32 ft.=122 ft.) Back frame (7 ft. high, nine lengths, and plates 32 ft.=95 ft.) End frames (ten lengths cut to measure, and allow extra for window openings, etc., say=100 ft.)	250	25-32	6.25-8.00

	Standard No. of ft.	Price per 1,000	Cost in Dollars
Shiplap (four walls, 160, 120, 120, 112 sq. ft.=512 sq. ft.)	512	25-30	12.80-15.30
Siding ditto ditto	512	32-40	16.35-20.40
Roof—rafters, nine lengths, each 14 ft. of 2 in. by 7 in.=126 lin. ft.)	150	25-30	3.75- 4.50
Rough boarding, 17 by 14 sq.=238 lin. ft.)	250	25-30	6.25- 7.50
Shingles, to cover 250 sq. ft. = 2,000 shingles	....	4.00-5.00	8.00-10.00
Building paper (3 rolls)=three rolls	....	1.00-1.50	3.00- 4.50
Spikes, nails, and shingle nails (5 lb., 20 lb., and 10 lb.)=35 lb.	....	5 cents	1.75- 1.75
Door ($1), window ($2), chimney ($1), hinges, latch, etc. ($1)	....	.....	5.00- 5.00
			$88.00 to $107.00 (£18) to (£22)

If within teaming distance from a lumber mill, prices would be very much lower—from $10 to $12 per thousand upwards.

The next heavy item of expense is a cooking stove, for which $10 or $15 may be allowed, which is putting it very low. It is hardly necessary to remark that a fairly thorough outfit of housekeeping utensils is also required before the shack may be looked upon as home.

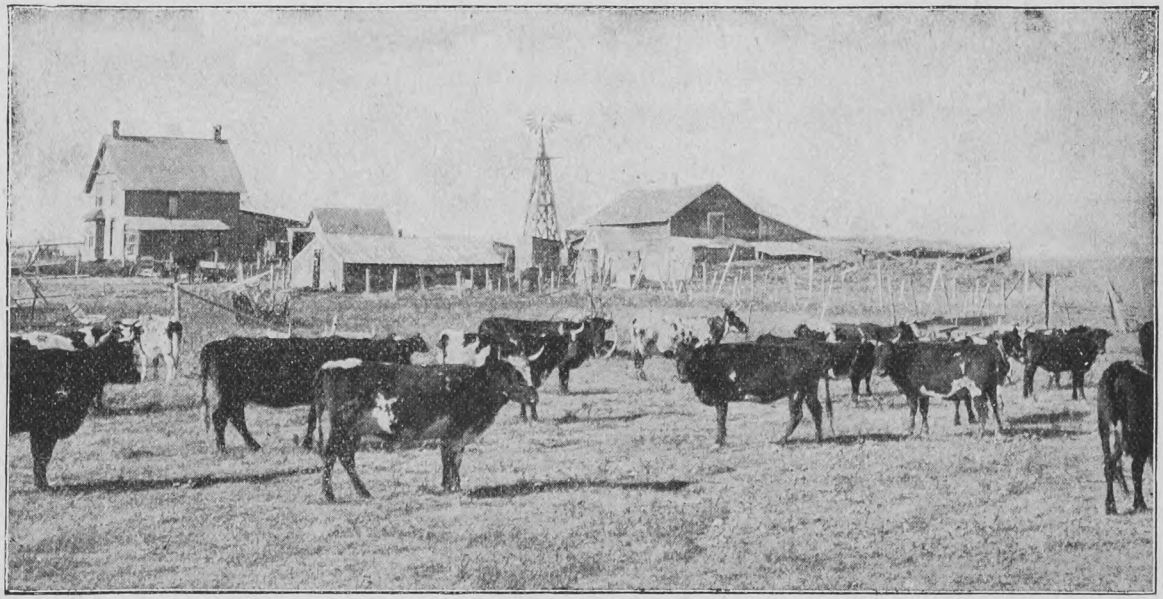
The tools required in the construction of such a shack are pickaxe, spade, hammer, saw, level, square, gimlet, screwdriver, and, perhaps, chisel. They will cost about $8 if bought new, so that the outlay in building the shack requires an expenditure of about $115 (£23), without counting anything for labour.

The size estimated for is plenty large enough for two friends "baching"* together, and will satisfy the homestead inspector as to fulfillment of regulations regarding construction of a residence, though I think he would certainly "kick" against anything smaller.

A Sod Stable.—Many homesteaders in the districts where sawn lumber is dear and logs unobtainable, are well content with a stable built of turf or sods. Sometimes the settler attempts to house himself in a sod shack, though with what measure of success I cannot say. Even a sod stable, if built in any sort of haphazard fashion, is a poor apology, but, constructed on well-thought-out principles, is well worth the labour expended on it.

One has first to be sure of a well-knit, thick and square-cut sod. The turfs, whatever length the plough turns them before they break, need to be cut across to a regular length of at least two feet, or, better still, twice their exact width, which, being

*Living a bachelor life.



Dairy Cattle are Proving as Profitable as Grain Throughout the Prairie Provinces.

either 14 in. or 16 in., makes them 28 in. or 32 in. long. They thus form, as it were, earthen bricks, with which the stable walls may be built securely bonded. Of course, it takes a large amount of turf, but it is certainly useless to try and build anything satisfactory with the sods simply lying on top of one another lengthwise, either with or without the support of a pole frame. Indeed, I have never yet seen a really good sod building in which the turfs are laid against a framework. The combination of sods and poles is neither workmanlike in style nor satisfactory in use.

With a thick, solid sod wall, the door opening is provided for—i.e., left open—from the start, and as the level of the window bottom is reached—if one is thought advisable—a thick plank may be laid across to receive later the window-frame upon it. No uprights should be placed in position yet, either for doors or window. Some allowance is necessary for the settling of the turfs as the walls grow. When from its own weight the sod has suffered a certain amount of shrinkage, the window and door frames may be fixed; but first, as the wall reaches a suitable height, a platform of planks of suitable length, and at least two inches thick, must be laid over the openings to receive and bear the sods that complete the building of the wall to the required height.

The roof-framing may best be formed by laying the sills or wall plates on the inner edge of the front (higher) wall and outer edge of the back wall, with sufficient overlap at their ends to allow for eaves at the sides of the building, the spaces remaining under the slope of the roof-poles immediately over the walls to be filled in with more turf.

Stables of this description, built late in the fall of the first year's residence, are often roofed with flax or oat straw grown on the first breaking of the spring of that year; otherwise more sods must be laid on top of the roof poles to complete the roof. No ventilation need be provided for.

These sod stables, if not built too big, form a snug and warm shelter for the team, and are a great standby for the man who has more time to work for himself than money to spend on more convenient building material.

A good size for a small sod stable is about 12 feet wide inside, which is the least width convenient for work in feeding the animals and keeping the place clean, and about 16 feet long inside, which allows ample room for a team of two horses or oxen, and at a pinch will accommodate those of a visiting neighbour as well.

A rough calculation will give one a fair idea of the amount of land to be ploughed in providing the sod for such a building.

Consider the ploughshare to cut a furrow 14 inches wide and 3 inches deep. That means the turf measures 28 inches by 14 inches by 3 inches.

The building is to be 12 feet by 16 feet inside. That means 20 ft. 8 in. long by 16 ft. 8 in. wide outside, and the height may well be 8 feet at back, rising to 10 feet at the front, which gives sufficient slope for a sod roof, as otherwise the rains, instead of compacting the roof, causes the turf to slip down.

Two longer walls, calculating the outside length, and having a thickness of 28 inches and a mean height of 8½ feet, is 41 ft. 4 in. by 2 ft. 4 in. by 8 ft. 6 in., equal to 818½ cubic feet.

Two end walls, calculating inside length, is 24 ft. by 2 ft. 4 in. by 8 ft., equal to 476 cubic feet.

A total of 1,294½ cubic feet of sod ploughed 3 inches thick, means a ploughed area of 5,178 square feet. After this a certain allowance must be made for useless sod broken in the ploughing. This would vary according to the nature of the land, docility of the team, and skill of the ploughman, but 25 per cent would not be too much. That brings it up to about 6,500 square feet, or rather more than the eighth part of an acre. This must be ploughed from unbroken land immediately before setting out to build, as it is not worth while building with old or weathered sod.

Construction of a Log Hut.—One great advantage, and a double and treble one, is for the homesteader to have settled within reasonable distance of wooded country. It means fuel for the trouble of fetching it; free fencing materials on the same terms, and last, but not least, logs for building. Fuel and fencing is, however, within reach of many who are still far from getting anything large enough for building. Such logs must come from trees larger than are usually found in the isolated bluffs that dot a great portion of the North Saskatchewan Valley and spread through the valleys of the Battle and Vermilion Rivers to the south of it.

These bluffs afford a certain amount of fuel in the fire-killed trees, of which many bluffs are mainly made up, and fencing wood is obtained from the younger growth that starts afresh after every fire. Periodical visits are also made in the winter to the nearest known wooded country. Willow bushes make up much of the undergrowth, and will serve for fuel, though this is obtained much more conveniently from poplar, which also gives good poles for fencing, and an inferior class of building log not straight enough to build with easily and not large enough for the best work.

Spruce is the best kind of building log available. Very seldom seen growing in small bluffs, it may be classed as a forest tree, running in belts for many miles in company with poplar, birch and pine. It is an evergreen fir tree, and, roughly speaking, to be found anywhere north of a line drawn from Prince Albert, in Saskatchewan Province, west to Edmonton, the capital city of Alberta. As spruce is long and straight, and known to be more durable than poplar, there is a distinct advantage in procuring it.

Spruce trees, of whatever size, will grow into timber, fit to be sawn up into lumber at the mill—so that a Government permit to cut should be obtained. These settler's permits are procured at the nearest lands office at a nominal charge, the appellant stating where, for what purpose, and how much he wants to cut. The permit is granted to cut the amount required by the homesteader for his own buildings and fencing, no logs to exceed 12 inches in diameter at the butt, and fence-posts and poles correspondingly smaller.

Good straight spruce tapers very slightly. A 12-inch log may be cut to any length convenient to handle, and still be nearly as thick at a 30 ft. end as at the butt.

The Lands Department is not so strict with regard to poplar. I believe it is freely admitted that this class of tree is for settlers' use, and no restriction placed on reasonable enjoyment of such wood.

For building they should be at least 9 inches thick at the butt, which means about 27 inches in circumference if one wishes to measure with a tape, and this is small for building. Such trees—poplar—give logs about 15 ft. to 20 ft. long before they taper to such a thickness as is unserviceable The great trouble is to find sufficient trees large enough and straight enough to be worth cutting that are growing fairly near together. One does not want to wander over a large area looking for one tree at a time.

The closer trees grow together the straighter they are, so that a well wooded region gives far better building logs than can be found in isolated bluffs. This, of course, is a well-known thing in forestry with all kinds of trees. Even the spruce, which in a forest grows as straight as a telegraph pole and nearly free from branches till it reaches a great height, appears in English towns as the "Christmas Tree," having been purposely planted so as to grow shrubby and many branched.

The special outfit required by the homesteader in getting his logs include team and axe and also logging chains with which to drag the felled logs out of the bush and bind them on the wagon or sleigh after loading.

Familiarity in the use of the axe soon grows upon the greenhorn at homesteading; sometimes, however, at the cost of a cut foot, if that has not already been sustained in the more homely occupation of cutting firewood.

The logs should be cut to length required and trimmed of branches where they are felled, allowing at least 3 feet overlength, i.e., logs cut to a length of 15 feet will serve for a 12 ft. wall, inside measurements, the overlength being taken up in the ends that overlap at the corners of the building.

Here they are joined together by cutting a notch in the underlying log, where the others lie across it at right angles at either end. As regards size, sometimes poplar growth will give logs 14 inches or 15 inches at the butt, tapering to 8 inches or 9 inches up to a length of 24 feet, but this is very good.

Having teamed the logs to the spot where the building is to be constructed, the plot is pegged out by a stout stake being driven into the ground at each inside corner of the hut. The stakes need not be long, as they are only required as a help in setting the first two or three tiers of logs in position more accurately. A shallow trench should be dug along either the two sides or two ends of the plot, in which to sink the first two logs an inch or two. The next two are then sunk into deep notches on the first pair, and so the work proceeds, each pair of logs being laid in turn in place, the under log marked, and the upper removed to allow of cutting the notch into which it is dropped.

Choose the heavier logs for the foundation, and, having set them square, it is as well to square or face the inside of all four, that is, shave off the rounded surface so that it forms a flat-sided wall where the plank flooring is to be laid down.

This work is best done with a broad-axe, which has a blade bevelled on one side only, like a chisel. It "bites" in making a flat or shaving cut far better than a felling axe.

After this the building goes straight forward to the full height of the walls, with the single exception that, as the extreme height of door and window are reached, the top log to be cut in making the opening should be sawn half through at the measured width required to let in door and window frames. When the walls are up to full height the openings are cut out before the roof-work is proceeded with. It consists in putting the blade of the buck-saw—which is a narrow saw-blade set in a bow-shaped frame—through the cuts already made, and sawing down through each log till the required depth is reached. This operation is more quickly and accurately performed with a "cross-cut" (i.e., long double-handed) saw—a more expensive tool.

A board temporarily nailed against the cut ends of the logs keeps them in place for the time being.

The gables are raised by spiking shorter logs onto the end walls, and, when in position, cutting the ends to conform with the required slope of the roof from eave to ridge. They may, with advantage, be "squared" top and bottom, and so lie in place easily before spiking and securely after, as, of course, they are too short to be notched into the walls on either side. This necessitates handling them from a temporary platform that will consist of a

light log, or perhaps a plank, laid on the protruding ends of lower logs.

The ridge pole should be as straight as can be obtained, and fairly heavy, to bear the weight of the roof. To save it from bending, it can be held up by one or two uprights placed as pillars, but a small shack does not need such support for the ridge. If the roof span is over 12 feet, additional poles may be laid one on either side between ridge and walls.

Next are laid the roof-poles as rafters, and quite close together. They may be nailed to the ridge and walls, or, if thick enough, simply notched where they lie on the wall. They should overlap about 18 inches at the eaves. Whether they are laid butt upwards or butt downwards is a matter of choice, and immaterial, so long as all lie the same way and close together. Over these poles is spread a sheeting of building paper, a little coarse hay, and then freshly-ploughed sods placed as compactly as possible. The chimney opening should be bordered with sheet iron.

The slope of a sod roof should not be more than one in four, about the same as that of a corrugated iron shed roof as constructed at home.

The next procedure is the "chinking," that is, plugging the interstices between the logs so that they will hold the mud when the walls are plastered. Plugs are either split from the waste logs, or are made of clean straight saplings, and may be nailed from the inside to hold the puddled clay thrown in by the trowel from outside the walls. Good sticky clay, which with a little water will work up into a good pug, may usually be found under the sod on the banks of the nearest slough or wet spot.

Spruce logs are sometimes laid with layers of moss between, but as, in comparison, the best of poplar logs are crooked and twisty, moss mortaring will not save plastering, and only gives extra work.

The windows, doors, flooring, etc., mean a certain cash expenditure and some finishing work, and then the homesteader is settled in a house that in winter is far warmer and in summer far cooler than the more expensive lumber shack.

A small log hut, 12 ft. by 16 ft. inside, will need fifty to sixty logs (according to thickness) from 15 ft. long for the ends and from 19 ft. long for the side walls; 100 roof poles 3 inches thick, or a less number of 5-inch poles, each 9 ft. long; some small stuff for chinking; a roll of tar paper for roof and door and window packing; 350 square feet of turf; some rough boarding; and a few pounds of nails and spikes, etc.

Necessary tools are: axe (with a spare handle), logging chain, spade, trowel, and bucksaw, with the smaller tools for rough carpentry in finishing, etc.

SOME PRICES OF FARM IMPLEMENTS.

Breaking plough £4 to £5; ordinary plough £3 10s. to £4; gang plough £13 10s.; drag harrow £4; horse mower £12 to £15; horse rake £5 to £6; farm wagon £17 10s. to £19 10s.; harness £5 to £7 per set.

AVERAGE COST OF FARM DEVELOPMENT AT CONTRACT PRICES.

Breaking, 3 inches deep, 12s. 6d.; 5 inches deep, 16s. 6d. per acre; harrowing, each operation, 1s. to 1s. 3d. per acre; discing three times, 6s. per acre; seeding (not including seed), 2s. per acre; seed per bushel, market price; fencing per mile, three wires, £22 to £25; four wires, £24 10s. to £29.

GROWING WHEAT FOR PROFIT.

The average cost of production per acre per annum in Western Canada, after the first breaking and discing, according to the Report of the Scottish Agricultural Commission of 1908, is as follows:

Ploughing stubble, 7s. 6d.; harrowing twice, 1s. 6d.; seeding, 2s.; cost of seed (1½ bushels at 3s. 9d.), 5s. 8d.; cutting, 1s. 8d.; binder twine, 1s. 3d.; stooking and hauling, 2s. 7d.; threshing (20 bushels per acre at 3½d.), 5s. 10d. Interest at 5 per cent. on the value of land taken at £4 ($20) per acre, 4s. Total net cost, £1 12s. per acre. Taking the average crop at 20 bushels per acre, realizing 3s. 6d. per bushel at elevator, the gross return is £3 10s. per acre, or a net profit of £1 18s. per acre.

FROM ONE WHO SUCCEEDED.

The following letter from W. S. Simpson will be of interest as showing how an old countryman, without any previous farming experience, succeeded in building for himself a fine home in the Canadian West:

Larchmount Farm, Pambrun,

Swift Current, Saskatchewan.

Perhaps a brief description of my experiences and success in Canada might be of interest. I left Liverpool on the Allan liner "Numidian" on August 22nd, 1901. I was accompanied by my wife and five-year-old-daughter. We arrived in Winnipeg on September 2nd, strangers in a strange land. The same day, thanks to the Immigration officers in Winnipeg, I had secured a situation with a farmer close to Winnipeg. I can assure you I was green. Yes, green in regard to Canadian farming methods, but I had come to Canada to become a farmer, and a farmer I intended to be, so put up with all kinds of fun and jokes being poked at me, and stuck to my job until harvest was over and the grain in the elevator, when I returned to Winnipeg, having earned $40.00 in two months, and, what was more, I had learned something—that I was in a new and different country, and that to succeed I should have to adapt myself to the ways and means of the country of my adoption —Canada—and break myself from the customs of my native land. In October of the year of our arrival in Canada a son was born to us. My forty dollars went, but I succeeded in getting work on the Electric Railway as a conductor. I stopped working on the railway in spring, for I meant to keep to farming, and in March I hired with a farmer for the season, and not being an experienced man could not get very high wages. Anyhow, I got along all right, and did my best, and my boss was very good to me, showing me a great deal. In autumn we had $200, but foolish folks as we were, we returned to Winnipeg for the winter, instead of staying on the farm. Well, we worked here and there until misfortune overtook us. Our little boy caught scarlet fever. He was taken to the hospital. He got well, but no sooner had he returned home than our dear daughter took sick with the same disease, dying May 20th, 1907. This was a very hard blow to us, both to our hearts and pockets. We were almost without funds at this time. J. O. Smith, the then Commissioner of Immigration in Winnipeg, advised me to go to Moose Jaw or Swift Current, as there were great chances in that part of the country. He described the different localities where good land could be had. I came up to Moose Jaw and worked out again, getting a farm to look after for the winter. We came up to Swift Current in March, 1908, locating on my present farm, April 6th, 1908. We had $350 when entering, and I hired a man to haul me lumber to build a house. The hauling and lumber cost me $150. Both myself and Mrs. Simpson worked out again and earned another $350, living on our homestead in the winter. In spring of 1909 I bought three oxen, which cost me $200. I bought a walking plough for $24.00 and an old wagon for $30.00. I broke 25 acres and prepared it for crop, which I sowed to oats. I then broke for others at $4.00 an acre, earning about $6.00 a day. The oxen had no other feed than the prairie grass. In spring of 1910 I sold my oxen and bought four horses, new wagon, riding plow, disc and drag harrows. I broke another 40 acres and went to work with my horses. Mrs. Simpson and I worked out during harvest and threshing, returning home in time to look after our own crop. In spring of this year, 1911, I sowed 50 acres of wheat, which yielded 32 bushels per acre. I secured four bushels of Marquis wheat from the Dominion Government Experimental Farm at Indian Head, which I sowed on two measured acres. This yielded a total of 89 bushels, which is 44½ bushels per acre. This wheat is for seed for 1912. I may say here that I won the following prizes in 1911: Swift Current Agricultural Fair, July 19th, 1st for wheat, 1st for oats,

1st for field peas, 2nd for sweet peas; also at the Dominion of Canada Exposition, Regina, 1st for wheat, 1st for oats, and 1st for flax. I sowed 12 acres of oats, which yielded 76 bushels per acre. In May I broke 30 acres of new land, which I prepared and sowed to flax—linseed—which yielded 13 bushels per acre, and which I sold for $1.95 per bushel. Just fancy the virgin prairie ploughed once; that is, the sod turned over a week before sowing, yielding a crop worth over £6 per acre! My homestead is all fenced and all under cultivation with the exception of 10 acres, reserved for home grounds, barnyard, garden, etc., and only three years ago was bare prairie, given over to ranching. My land is worth at the present $50.00 an acre. Have been offered $10,000 (£2,000) cash. Not bad returns for one coming to Canada as I did, WITHOUT ANY CAPITAL. I have to-day 320 acres of as fine a land as lies outdoors, a good home, as well as barn, granaries, pig houses, etc., four horses, two milk cows, nine pigs, fifty head of poultry, two wagons, two ploughs, one of which is a breaking plough, for breaking the prairie; the other is for reploughing land on which a crop has been grown; one disc harrow for pulverizing the soil, one set of smoothing harrows, one self-binder, one sub-soil packer (this implement is used to pack the soil after ploughing), one seed drill, etc. Our garden is one acre in area, on which we grew in 1911 250 bushels of potatoes besides other garden truck. We can grow most anything. It seems incredible that a man coming to Canada ten years ago without capital, to-day is worth ten thousand dollars (an earning of $1,000 a year), but fact is stranger than fiction, and I would not take $12,000 for my farm as it stands, for have I not a home, where I am happy and contented, owner of my own place, my own boss? What more should I want, and where could I better improve my condition in life? Nowhere.

A great deal of misunderstanding seems to be general regarding our climate. This is due a great deal to writers of fiction, who have wilfully misrepresented Canada's climate. We have cold weather in our healthful prairie provinces. It would be absurd to try to make others believe that our winters are fleeting, or that they are particularly mild. There has always been a cold season here, and there always will be, and it is a great thing for the agricultural possibilities of our land that this is so, for Jack Frost is the farmer's greatest friend, for he makes the land fit to grow our famous hard wheat. The prairie winter is healthy, and when you come to think of it, health is everything. There is no air more invigorating and more bracing practically at all seasons of the year than Western Canada. Our winters are of bright skies and almost continual sunshine; not like the winters I was used to in my native town of Kendal, Westmoreland, England, rains unending—gloomy, miserable.

(Signed) WM. S. SIMPSON.

CANADIAN GOVERNMENT AGENTS.

Intending settlers would do well, before deciding upon the particular locality to which to go, to consult one of the Canadian Government Agents in the United Kingdom, who will, without charge, gladly give, either personally or by letter, full and reliable details regarding any point upon which the intending emigrant desires information. Other pamphlets about Canada will be supplied upon application to any of these agents, whose addresses are:

ENGLAND—

MR. J. OBED SMITH, Assistant Superintendent of Emigration, 11-13 Charing Cross, London.

MR. A. F. JURY, 48 Lord Street, Liverpool.

MR. FREDERICK CAMPBELL, 139 Corporation Street, Birmingham.

MR. L. BURNETT, 16 Parliament Street, York.

MR. JOHN CARDALE, 81 Queen Street, Exeter.

MR. FRED. W. KERR, Long Causeway, Peterborough.

MR. E. McLEOD, 54 Castle Street, Carlisle.

SCOTLAND—

MR. J. K. MILLAR, 107 Hope Street, Glasgow.

MR. G. G. ARCHIBALD, 116 Union Street, Aberdeen.

WALES—

MR. S. W. PUGH, 28-29 High Street, Cardiff.

IRELAND—

MR. J. WEBSTER, 17-19 Victoria Street, Belfast.

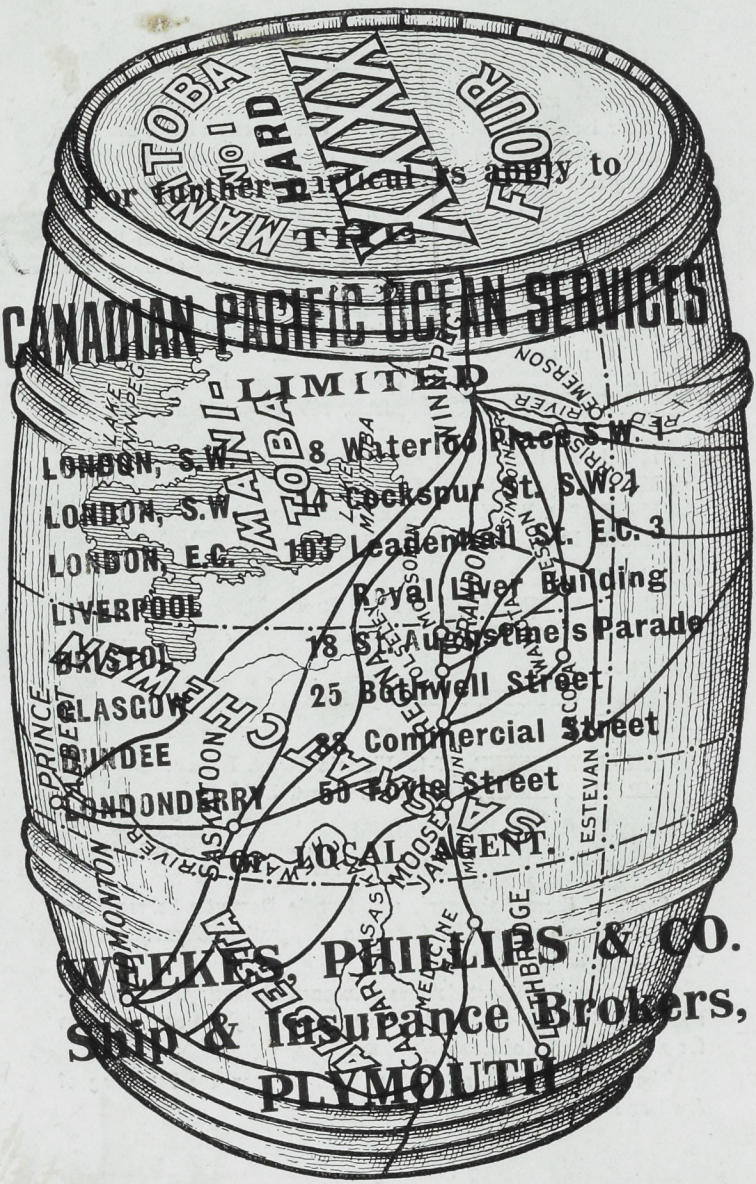
MR. E. O'KELLY, 44 Dawson Street, Dublin.

IMPORTANT.

Farmers, Farm Labourers, and Female Domestic Servants are the only people whom the Canadian Emigration Department advises to go to Canada.

All others should get definite assurance of employment in Canada before leaving home, and have money enough to support them for a time in case of disappointment.

The proper time to reach Canada is between the beginning of April and the end of September.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